

CONSTRUCTION QUALITY ASSURANCE CHECKLIST

Predesign / Schematic Design

- ___ Major constructability issues have been identified.
- ___ Contractual type has been identified and is appropriate (fixed price, design build, 8a set aside, competitive negotiation, etc.)
- ___ All compliance has begun or is complete (SHPO, NEPA, EA, etc.)
- ___ Scope of work consistent with program and within budget.
- ___ Work on easements, right of ways, cooperative agreements, etc. have been initiated.

Design Development

- ___ Required permits (Water, Sewer, and Road) are outlined.
- ___ State or local contacts included.
- ___ Individual permit requirements have been listed.
- ___ All compliance has begun or is complete (SHPO, NEPA, EA, etc.)
- ___ Logistics – traffic control, impacts to park and visitor operations have been considered and addressed.
- ___ Site access issues, load limits, bridge and/or tunnel height restrictions have been identified.
- ___ Long lead items, material and equipment availability, special delivery or construction requirements have been considered.
- ___ Value Engineering potential has been investigated.
- ___ Notes on drawings are appropriate and do not conflict with the specifications or General Provisions.
- ___ Standard NPS division 1 specifications have been incorporated. Edited to the greatest extent possible.
- ___ Preliminary site investigation complete and existing conditions verified and included.
- ___ Hazardous material testing has been done and scope of work identified.
- ___ Archeological potential has been assessed and protection specified. Coordination with Park has occurred.
- ___ Availability of material, labor, and equipment on remote sites has been considered.
- ___ New utility services contracted separately and not a part of this package.
- ___ Draft Constructability checklist has been completed.
- ___ All legal work completed (easements, right of ways, cooperative agreements, etc.).
- ___ Estimate is within budget with appropriate mark ups for this stage of development.
- ___ The draft Price Schedule is completed and coordinated with specifications.

Construction Documents

- ___ Final Constructability checklist included and completed.
- ___ State and local permit review comments and details have been incorporated.
- ___ All compliance is complete

- ___ No funding issues. Class A estimate is within available funds.
- ___ Special inspection requirements listed.
- ___ Staging areas are identified on site plan
- ___ Staging areas are adequate for the intended purpose.
- ___ Availability of temporary utilities for staging (cost and time implications, park supplied or contractor)
- ___ Logistics – traffic control, impacts to park and visitor operations have been considered and addressed.
- ___ Impacts of site access issues have been included in special conditions.
- ___ Long lead items that may affect contract period have been considered.
- ___ Specialized equipment and materials have been considered in the estimate and contract period.
- ___ Sole source materials have been adequately justified.
- ___ Government furnished equipment and materials are adequate and will be available when the contractor needs them.
- ___ Requirements for resource protection specified and adequately shown.
- ___ Accurate survey data on the plans (BMs, TBMs, TOPO)
- ___ Construction limits adequately shown and defined (needed for both access and construction limits).
- ___ Special signage requirements addressed (traffic, park, etc.).
- ___ All existing utilities located and accurately shown
- ___ Temporary system requirements have been coordinated with park or concession needs.
- ___ Salvageable items have been identified and listed.
- ___ Noise, dust and special safety concerns have been addressed in the special conditions.
- ___ Constraints on means and methods are justifiable.
- ___ If rock excavation is expected it is clearly defined and accounted for in the Price Schedule with an estimated quantity.
- ___ If Blasting is allowed the standard NPS explosives specification is included with all safety requirements.
- ___ Hazardous material scope of work is clearly shown, quantified and accounted for in the estimate. State and local requirements have been considered.
- ___ Archeological monitoring requirements have been addressed in the specifications. Sensitive zones are protected.
- ___ If the availability of material, labor, or equipment is an issue on remote sites has it been considered in the cost estimate and in the overall contract period.
- ___ Site access constraints are appropriate.
- ___ Appropriate contract length (considering weather, seasons, long lead items, fabrication and delivery, etc.).
- ___ Park or Concession imposed restrictions included in the package are appropriate and impacts to cost and schedule have been considered.
- ___ Clear delineation of local utility responsibilities (scope, equipment supplied etc.) and contractor responsibilities included as a part of this contract.

- ___ Disruption of utilities and down times have been coordinated with the park and language included in division 1 specifications.
- ___ Specific phasing requirements have been included as needed.
- ___ Specialized materials are necessary and mfg. installation and certifications are specified.
- ___ Park or concessionaire beneficial occupancy's (grand openings, fixed completion dates) have been considered in the overall planning.
- ___ Overlaps with adjacent and concurrent contracts have been identified with requirements for contractor to coordinate as needed.
- ___ Value engineering decisions have been incorporated.
- ___ Training and certifications have been outlined in the individual spec sections.
- ___ Operation and maintenance requirements have been included.
- ___ Notes on drawings are appropriate and do not conflict with the specifications or General Provisions.
- ___ Adequate detail provided.
- ___ Specified products are detailed on drawings as needed.
- ___ Check for consistency of terminology between drawings and specifications.
- ___ Identify outdated code requirements.
- ___ Identify obsolete materials specified.
- ___ Verify all spec section references are correct and specification is included in the package.
- ___ Standard NPS Division 1 specifications have been utilized, and fully edited.
- ___ Contractor's use of premises has been appropriately addressed.
- ___ Park hours of operation and seasonal shut downs have been included.
- ___ Relevant reports are included (soils, hazmat, etc.)
- ___ Project schedule requirements are up to date and appropriate for the project size and complexity.
- ___ Submittal requirements match internal NPS/DSC processes.
- ___ All reference standards have been incorporated.
- ___ Quality control staff requirements are appropriate.
- ___ All required forms have been attached to individual specification sections.
- ___ Temporary service requirements have been coordinated with the Park and identified as either Government furnished or Contractor responsibility.
- ___ Contracting Officer's field office, furnishings, and equipment requirements have been adequately addressed.
- ___ Adequate barriers specified and shown on the site plan.
- ___ Requirements for compliance with applicable laws, environmental regulations, and ordinances have been included.
- ___ Park security requirements and special permits addressed as required.
- ___ Price Schedule included with Contract line item descriptions that are clearly written and collectively describe all work included in the contract.

- _____ All Options or alternates are accurately described and identified on the drawings.
- _____ Measurement for payment language included for each Contract line item accurately describes how completed work will be measured for payment.
- _____ Payment information included for each Contract line item reflects type of payment (lump sum or unit price).
- _____ Price schedule coordinated with specification section 01270 (Definition of Contract Line Items) and class A cost estimate.
- _____ Estimate is broken down per CSI format with Materials, Labor and Equipment for each Contract Line Item.